From russell Tue Sep 17 18:02:18 1996
Date: Tue, 17 Sep 96 18:02:16 EDT
From: russell (Robert A. Russell)
To: wang.res@worldnet.att.com
Subject: Salomon testing
Cc: lhayre@zip, ykc
Content-Length: 3002

Dear Dr. Wang:

For each time interval in our term-structure model, we call a routine "gauss_random" that returns two independent arrays of random numbers (standard normal distribution), one for the change in the Redacted, the other for the change in the Redacted. The routine transforms uniformly distributed random numbers to normal distribution by the Box-Muller method:

Redacted

Redacted

You mentioned in your talk that you do not use Box-Muller, but we are only concerned that the output be normally distributed.

The definition for gauss_random is:

Redacted

We then Redacted the x and y vectors for the different time periods; we understand that this would not be done with your sequence.

To test your sequence, we would like to have a substitute gauss_random() that uses your sequence. It might be a good idea to mark these numbers for identification, perhaps by alternately adding to and subtracting from every tenth or so number some small amount that would not affect the results. This marking would not be known to us, as we would use your object code (SUNOS 4.x) to substitute for gauss_random().

There are two concerns in our testing your numbers. The first is that we not steal them from you. The second is that no one steals them from us, either while testing or thereafter. Clearly one solution is that we never obtain the sequence from you and that you test our code at your site. Unfortunately this would take a lot of work (and concomitant delay) for us to get some sort of substitute data base to run our CMO's at your site. In addition, Salomon is paranoid about releasing any of its code, in whatever form.

Lakhbir believes that we should do the testing here, as this is an absolutely necessary step to decide whether Salomon should purchase the sequence. We would provide you with suitable assurances of indemnity. Should the numbers be stolen (by us or third parties), at least they could be identified by the suggested markings. But I am still a bit concerned about security from third parties. Perhaps you are aware of security measures that we might employ to prevent someone here from taking the numbers and selling them.

Please let me know (1) if your random sequence could be utilized as I have outlined above and (2) how soon we can proceed with testing. Please call me (or Lakhbir or Y.K.) if there are any questions. Thank you.